

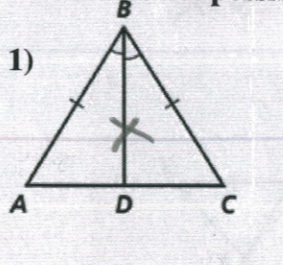
DO NOT WRITE ON THIS PAPER

Geometry  
Worksheet – Congruent Triangles

NAME \_\_\_\_\_

Date \_\_\_\_\_ HR \_\_\_\_\_

- a) Determine whether the following triangles are congruent.  
b) If they are, name the triangle congruence (pay attention to proper correspondence when naming the triangles) and then identify the Theorem or Postulate (SSS, SAS, ASA, AAS, HL) that supports your conclusion.  
c) Be sure to show any additional congruence markings you used in your reasoning.  
d) If the triangles cannot be proven congruent, state "not possible." Then given the reason it is not possible.

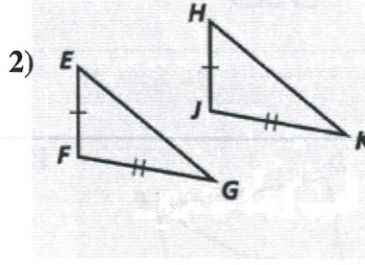


Congruence:

$\triangle ABD \cong \triangle CBD$

Reason:

SAS

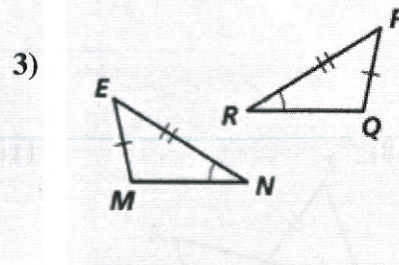


Congruence:

$\triangle EFG \cong \triangle HJK$

Reason:

NOT. EI

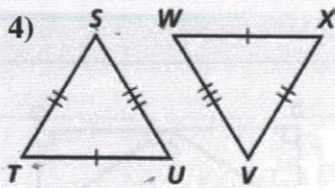


Congruence:

$\triangle EMN \cong \triangle PQR$

Reason:

~~SSA~~

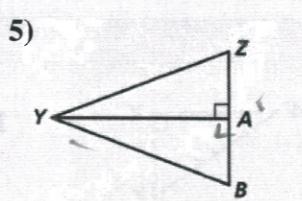


Congruence:

$\triangle STU \cong \triangle VWX$

Reason:

SSS

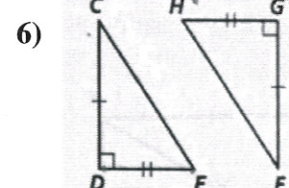


Congruence:

$\triangle YZA \cong \triangle YAB$

Reason:

NOT EN. INFO



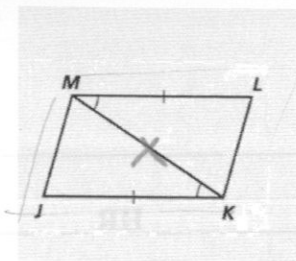
Congruence:

$\triangle CDE \cong \triangle FGH$

Reason:

SAS

7)



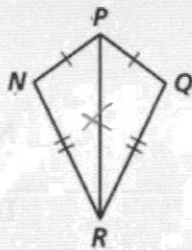
Congruence:

$$\triangle KJM \cong \triangle \underline{MLK}$$

Reason:

SAS

8)



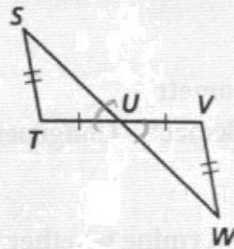
Congruence:

$$\triangle NPR \cong \triangle \underline{QPR}$$

Reason:

SSS

9)



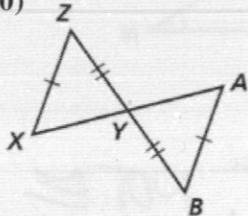
Congruence:

$$\triangle STU \cong \triangle \underline{\text{NOT } \cong}$$

Reason:

SSA

10)



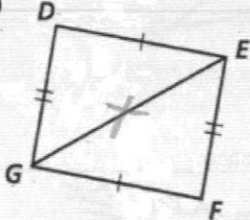
Congruence:

$$\triangle XYZ \cong \triangle \underline{\hspace{1cm}}$$

Reason:

NOT  $\cong$   
SSA

11)



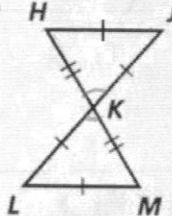
Congruence:

$$\triangle DEG \cong \triangle \underline{FGE}$$

Reason:

SSS

12)



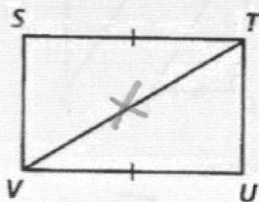
Congruence:

$$\triangle HJK \cong \triangle \underline{MLK}$$

Reason:

SSS or SAS

13)



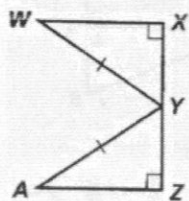
Congruence:

$$\triangle STV \cong \triangle \underline{\text{NOT } \cong}$$

Reason:

NOT  
ENOUGH  
INFO

14)



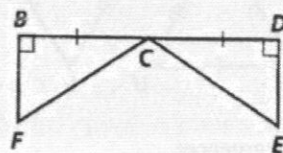
Congruence:

$$\triangle WXY \cong \triangle \underline{\text{NOT } \cong}$$

Reason:

NOT ENOUGH  
INFO

15)



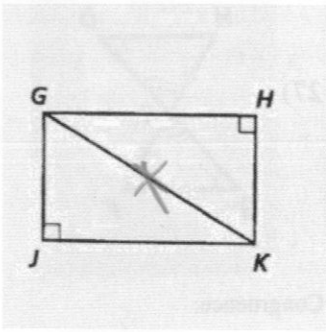
Congruence:

$$\triangle BCF \cong \triangle \underline{\text{NOT } \cong}$$

Reason:

NOT ENOUGH  
INFO

16)



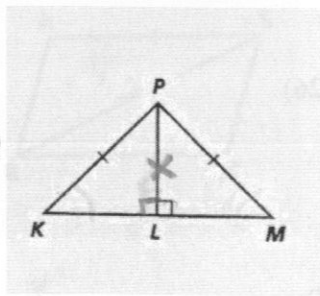
Congruence:

$$\triangle GJK \cong \triangle$$

Reason:

NOT ENOUGH INFO

17)



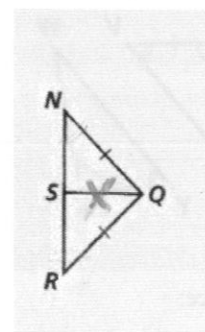
Congruence:

$$\triangle KLP \cong \triangle$$

Reason:

HL

18)



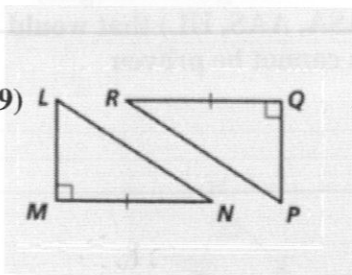
Congruence:

$$\triangle NSQ \cong \triangle$$

Reason:

NOT ENOUGH INFO

19)



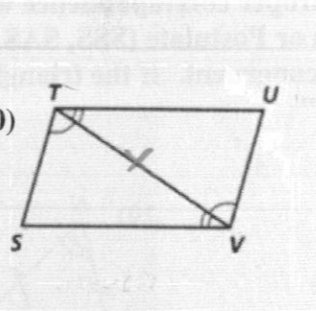
Congruence:

$$\triangle LMN \cong \triangle$$

Reason:

NOT EN. INFO

20)



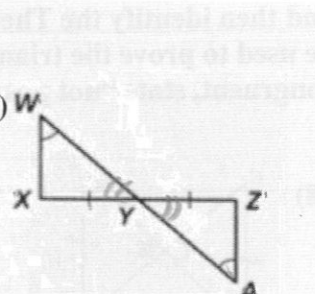
Congruence:

$$\triangle STV \cong \triangle$$

Reason:

ASA

21)



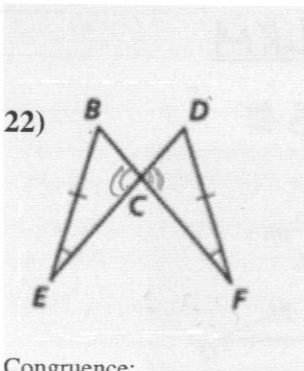
Congruence:

$$\triangle WXY \cong \triangle$$

Reason:

AAS

22)



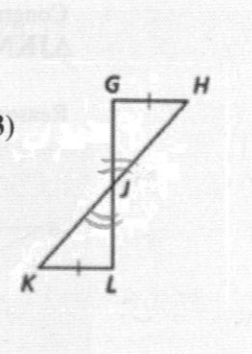
Congruence:

$$\triangle BCE \cong \triangle$$

Reason:

AAS

23)



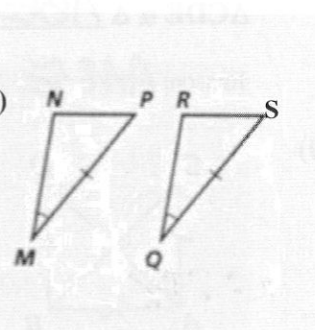
Congruence:

$$\triangle GHJ \cong \triangle$$

Reason:

NOT ENOUGH INFO

24)



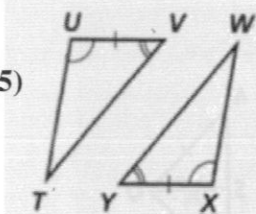
Congruence:

$$\triangle NPM \cong \triangle$$

Reason:

N.E.I.

25)



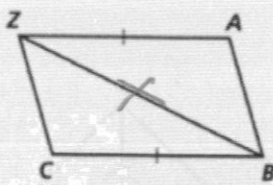
Congruence:

$$\triangle TUV \cong \triangle WXY$$

Reason:

$$ASA \cong$$

26)



Congruence:

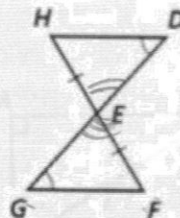
$$\triangle BCZ \cong \triangle$$

Reason:

$$N.E.I.$$

~~SS~~

27)



Congruence:

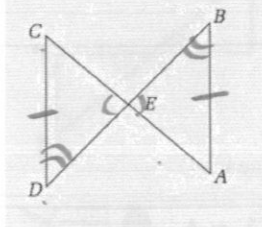
$$\triangle EFG \cong \triangle EHD$$

Reason:

$$AAS \cong$$

Use the given information to mark the diagram appropriately. Name the triangle congruence (pay attention to proper correspondence when naming the triangles) and then identify the Theorem or Postulate (SSS, SAS, ASA, AAS, HL) that would be used to prove the triangles congruent. If the triangles cannot be proven congruent, state "not possible."

28)



Given:  $\overline{CD} \cong \overline{AB}$ ;  $\angle B \cong \angle D$

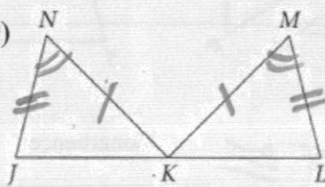
Congruence:

$$\triangle CDE \cong \triangle ABE$$

Reason:

$$AAS \cong$$

29)



Given:  $\overline{JN} \cong \overline{LM}$ ;  $\overline{NK} \cong \overline{MK}$ ;  
 $\angle N \cong \angle M$

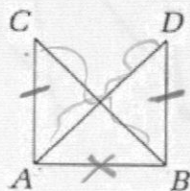
Congruence:

$$\triangle JKN \cong \triangle LKM$$

Reason:

$$SAS \cong$$

30)



Given:  $\overline{AC} \cong \overline{BD}$ ;  $\overline{AD} \cong \overline{BC}$

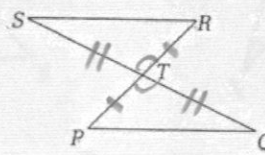
Congruence:

$$\triangle ABC \cong \triangle BAD$$

Reason:

$$SSS \cong$$

31)



Given:  $\overline{SQ}$  and  $\overline{PR}$  bisect each other

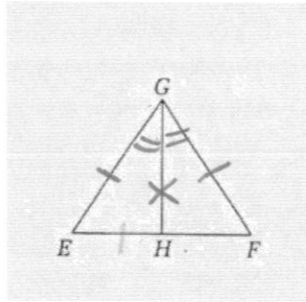
Congruence:

$$\triangle RST \cong \triangle PQT$$

Reason:

$$SAS \cong$$

32)



Given:  $\overline{GH}$  bisects  $\angle EGF$  ;  
 $\overline{EG} \cong \overline{FG}$

Congruence:  $\triangle EGH \cong \triangle \underline{FGH}$

Reason:  $\underline{SAS} \cong$

Now choose one of the problems from 28-32 and create a flow chart proof. Then transform your flow chart proof into a 2 column proof. Your "given" will be the "Given" from the problem and your "prove" will be the "Congruence" statement you created.